The
Ballarat
Naturalist

July 2019

Field Naturalists' Club of Ballarat

June excursion – Fungi Foray at Smythesdale

The excursion was well organised by Peter & Emily Noble as dual representatives of BEN and FNCB, with the cooperation of Fungimap. It was part of a celebration of World Environment Day, 2019 with a couple of differences from our other excursions.

The first difference was that we met at *The Well*, Symthesdale Community Hub for a two-hour presentation by Dr Sapphire McMullan-Fisher, Fungimap's mycologist (photo below) and the second, there were a record number of participants - 78 people including eight children. (When we headed off to the bushland the car-pooling, the line-up of cars was the longest procession I have seen, even at Seanna!).

In her talk to the packed room, Sapphire began by telling us that fungi are not classified as belonging to the plant kingdom nor the animal but in a group of their own. She talked about the functions of fungi in the environment and the importance of us learning about our local fungi.

Sapphire explained that fungi are important for the health of our environment, providing vital ecosystem services not carried out by plants or animals.

Dr Sapphire McMullan-Fisher

We learnt about the iNaturalist App. which enables us to share, via the internet, the local recognisable fungi we find in our area. We learnt how to monitor local fungi and know why it is important to do so.
To do this we need to register with iNaturalist and then we can add data to the Fungimap Australia project:
https://www.inaturalist.org/projects/fungimap-australia

We were also introduced to the 'lost fungi' which are the likely rare and threatened fungi in Victoria. The distribution data for Australia is patchy. Only about half of the approximately 3000 known Victorian macrofungi species are formally described, with only three currently protected. Volunteer groups need to be given more knowledge and tools to help them identify and report fungal observations. Also see our webpage https://fieldnatballarat.wordpress.com/

https://fungimap.org.au/cva-project/ is the website for a project which is putting Victoria's fungal biodiversity on the map. At the talk we were supplied with a 44-page booklet ***Lost Fungi*** which addresses some of the shortcomings in knowledge about the rare and uncommon Victorian fungi.

Birds-nest fungi, described p. 4

After a picnic lunch at *The Well,* arrangements were made for some car-pooling before we set off for the reserve less than ten km away. The reserve is a two-hectare heathy dry forest called Hillcrest Water Reserve, in Tannery Road, Scarsdale. At the reserve we carefully washed the soles of our boots to protect against carrying viruses into and away from this bush.

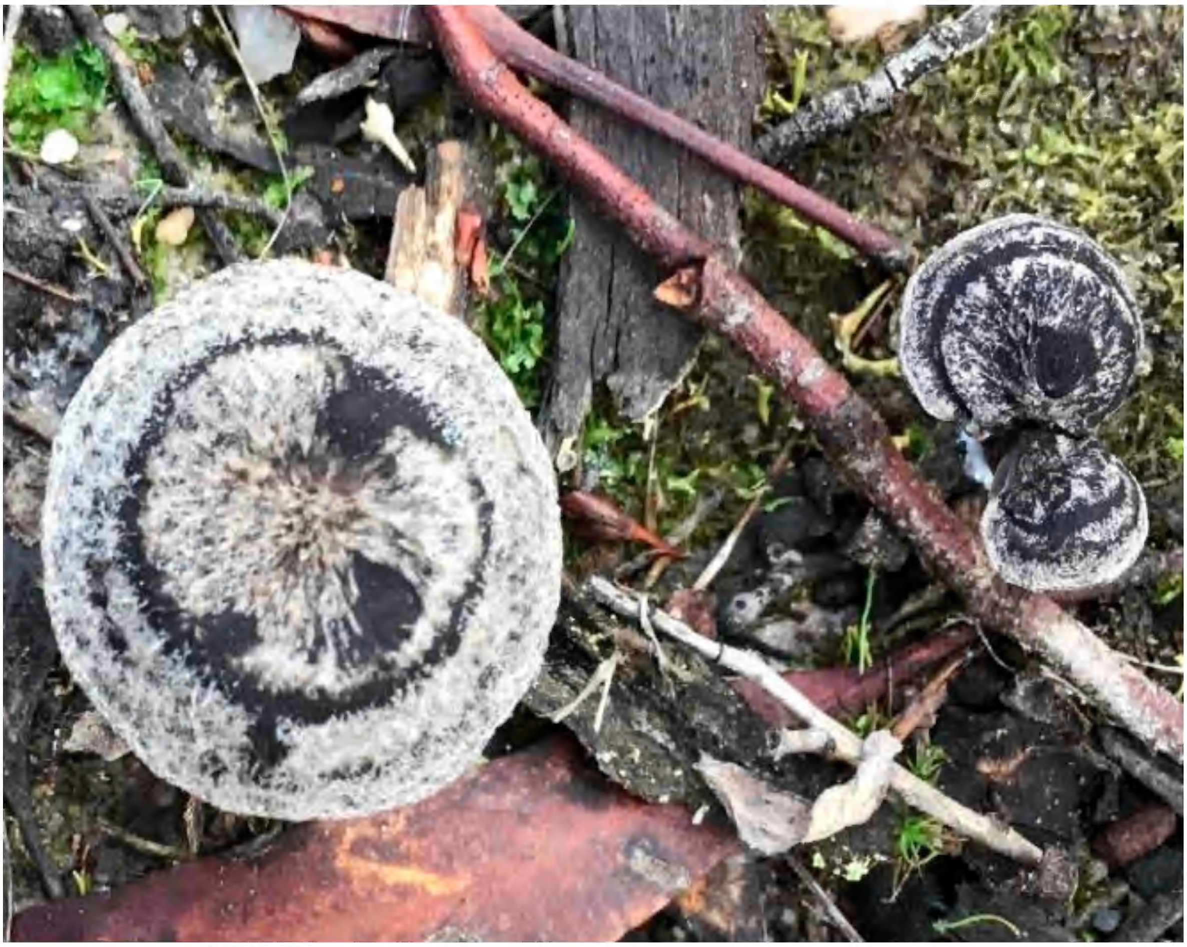
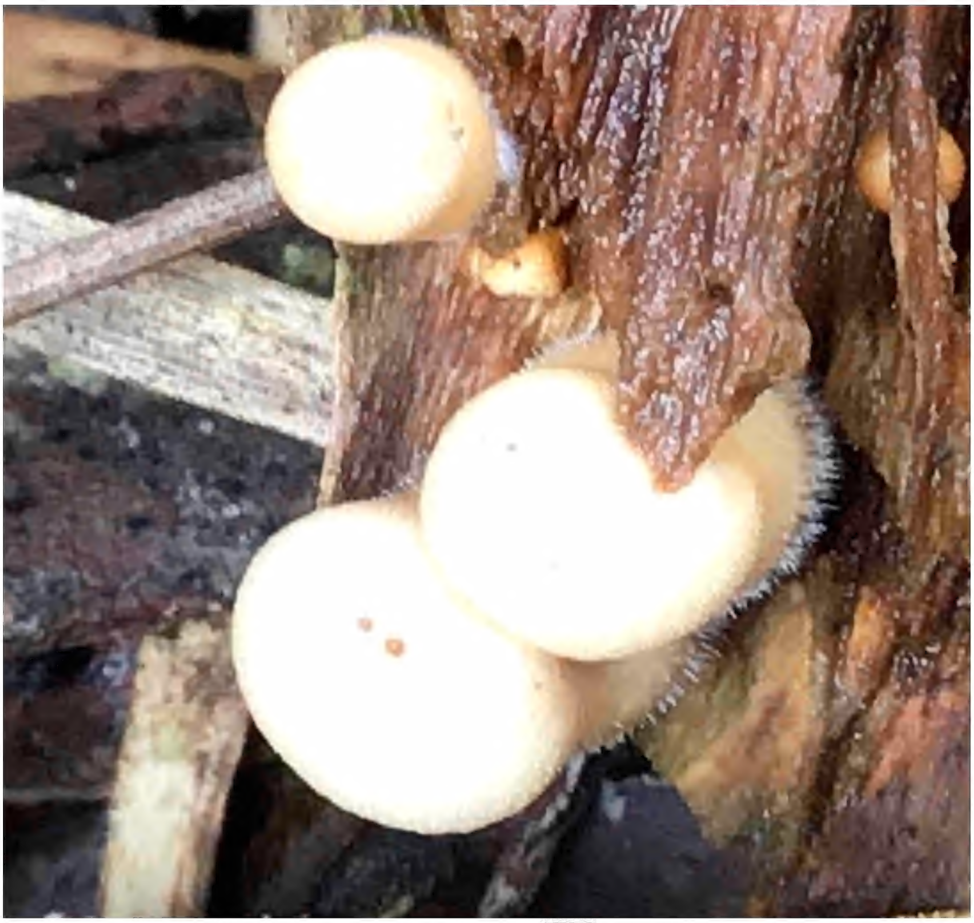


Photo: Andy Arnold

We had only moved a short distance from the edge of the road before we had our first big find, located earlier by Emily. The fungi (see photo above) was, not surprisingly, new to us, but also unknown to Sapphire. (One for further identification by experts!) This small group of specimens were coloured black, white and grey and with black stems.

The reserve was a good choice as we did not have to venture far before we found a wide variety of fungi some of which are named in the list at the end of the article, compiled by Les Hanrahan. Others, that were very common, were more-or-less ignored as being YAMs (Yet Another Mycena!). The Bird's Nest fungi, including the immature specimens was a popular find. The photo on page 4 is of the 3 immature Bird's Nest fungi. The photo on page 2 is of the mature one. These are very small fungi (5mm across), so taking shots with an iPad results in somewhat blurred images. Still, it has a definite bird's nest appearance don't you think?



Bird's-nest fungi *Nidula emodensis*

Other parts of the world of nature were ignored for the day except for spiders and remnants of Greenhood Orchids which were noted by Roger Thomas.

After nearly two hours spent finding and photographing fungi most of the group went back to the road to wash the soles of their shoes and thank Sapphire, Peter and Emily Noble before we headed back home to places as far afield as Geelong.

As a result of this excursion, many will be encouraged in our local communities to begin regularly monitoring our fungi to help with understanding and conservation of the important but often ignored part of the living world. We were certainly encouraged to join iNaturalist and share records whilst in the field by uploading records on Smart Devices. (I noticed someone was already doing it during our foray and know of others who have done some uploading since.)

For more information about the day and the talks see the pamphlets: ***Lost fungi,*** and ***Look for our Fungi***, handed out to participants whom I am sure are willing to share them with you.

Emily Noble and Fran Hanrahan

Field Naturalists' Club of Ballarat
Club Meeting Minutes June 7, 2019

Opening and Apologies

President John Gregurke welcomed 31 members (including new members Stephanie Davison and Doug Wilson) and seven visitors to the meeting.

Apologies: Kathy Elder, Mark Moravec, John Morrish, Margaret Thomas & Fiona McPhie.

Moved: F. Hanrahan Seconded: P. Dalman Carried.

Minutes of Club Meeting- May 3, 2019:

Accepted as a true & accurate record..

Moved: C. Hall Seconded: S. Faull Carried.

Business Arising from Correspondence:

FNCV membership has been renewed.

Having received a concerned email from member Rob Scott re. Council's current and planned events at Victoria Park and how they are likely to affect enjoyment of the reserve's amenity, natural environment and passive recreation opportunities, John G reported on his subsequent investigations into Council's future plans and current undertakings at Victoria Park: Ballarat Pony Club had an event that extended through a considerable area of Victoria Park. John found horse tracks on the edge of native grassland near Quercus Ave/ Plane Ave intersection but no tracks going through any areas of native grassland. John spoke to Daryl Wallis from City of Ballarat on June 7 who said he would follow up some of John's questions. He left a message on John's phone later in the day with the following information: the Pony Club had permission for the event from CoB, and some subsequent rehabilitation work has already been done with more to come. The Council has also approved the Spilt Milk music festival, to be held on playing fields in Victoria Park on 30th November 2019. There will be a camping area set up on the Russell St side of the Park. John to follow up re. parking and other impacts.

Reports:

Treasurer's Report: Opening bal: $8,727.55
Income $244.00
Expenses $131.00
Closing bal: $8,840.55

Motion that the Treasurer's Report be accepted and outstanding invoices be approved for payment.
Moved: E. Noble Seconded: P. Muller Carried.

Regional Forest Agreements drop-in session at Beaufort:
John G. and Andy reported on a low key event with a couple of well-informed representatives from Hamilton FNC and the Beekeeper's Association.
Feedback to the RFA Modernisation Program closes on June 30, 2019. The more members that can contribute, the better.

Joint Regional Forest Agreements Engagement (Commonwealth & Victorian Government):
Peter Noble reported on an RFA Modernisation Program meeting with staff from the Commonwealth Environment Dept, executives from the State Government's Department of Environment, Land, Water & Planning, local Council executives, Victorian National Parks Association CEO and Wombat Forestcare representatives in Daylesford on 3rd June 2019. Concerns included rolling-over a 20yr contract when so much of that contract remains undelivered in terms of restoration, monitoring, etc., and the context, best practice, thinking and scientific data available is so different to that when the RFA's were established 20 years ago. One of Peter's primary concerns is that the RFA's are just "managing" a line of decline and ongoing net loss of biodiversity.
Gayle Osborne from Wombat Forestcare presented the data on undelivered contractual obligations. Peter will try to get a copy of that data for sharing with FNCB members. The latest edition of ParkWatch from the VNPA also had a lot of information about the limitations and issues of the past and proposed RFA's.

Show & Tell/ Field Reports

Les reported 30 Blue-winged Parrots at his Bungaree property on May 23.

John G brought along the Club's Big Book of Lists, a wonderful collection of hand-written flora and bird records from the Ballarat region put together by Club legends over decades. He also told us about a vast colony of Red-tipped Tiny Greenhoods found on June 1st at Bushranger Reserve, Piggoreet.

Bill E has had a pair of Tawny Frogmouths roosting each night on 30cm perches, one above the other, up a gum tree next to his driveway in Scarsdale for at least the last month.

Graeme showed us a photo of a deer taken by the fauna survey camera on his Lal Lal property, and two videos captured by the same camera of an Antechinus at 6am. Grant Palmer suggested that it appeared to be an Agile Antechinus.

John Mildren described the life cycle of a Shaggy Cap Toadstool, *Coprinus comatus*, observed and photographed in his Ballarat backyard over two weeks in May.

Shirley found the water level at Mullawallah Wetlands had risen significantly recently, with Swamphens and a solitary Australian White Ibis observed.

Carol recommended a compelling radio show podcast of the "Big Ideas" program featuring a panel discussion between Bruce Pascoe, Tom Griffiths, a CSIRO researcher and a 2003 Canberra bushfire survivor on the topic of fire management, bushfires, warning signs, etc. It included a comparison of the constructive use of fire by traditional owners to manage the natural vegetation, and "our" management, which results in destructive wildfires. The CSIRO member said that the warming and drying of climate change had exacerbated the results of "our" poor management.

Wayne sighted a pair of Brolgas flying over the caravan park at Lake Burrumbeet.

Cameron Coventry sent in his report of a nesting pair of Wedge-tailed Eagles in a pine tree across the river near the end of Howe Street, spotted from Ballarat Town Common.

Wildlife of the Otways

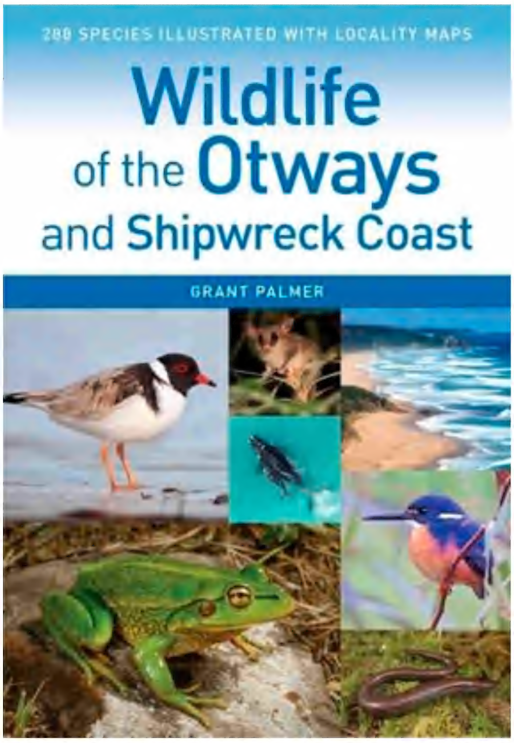
Researcher and ornithologist, Dr. Grant Palmer was guest speaker at June's club meeting. Grant spoke about his new book, *Wildlife of the Otways and Shipwreck Coast*, the area of south-western Victoria from Torquay to Warrnambool as far north as Colac. Vegetation is dominated by wet forest of mountain ash and blackwood with a ferny understorey, and cool temperate forest in the Otway Ranges grading to eucalypt woodland of stringybark species, then more heathy woodland, agricultural land, coastal dune scrub along rocky coastlines with intermittent sandy beaches and some isolated areas of damp sands heathy woodland.

The Otways is arguably the most interesting feature to visit, particularly from a species point of view. Grant explained that the wet forest/cool temperate rainforest of most of the Range is threatened habitat and that it is home to some distinct species:

Rufous bristlebird (*Dasyornis broadbenti caryochrous*) is an Otways subspecies, typically a bird of coastal habitats but also spreads inland via dense gullies;

Pied currawong, (*Strepera gracullina*) subspecies *ashby* (Otways Forester);

Otway Black Snail (*Victaphanta compacta*) is found only in the wetter forests, is endemic to the Otways, is carnivorous and is listed as endangered.


280 SPECIES ILLUSTRATED WITH LOCALITY MAPS
Wildlife of the Otways and Shipwreck Coast
GRANT PALMER

The area also has affinities with Tasmanian fauna in the Swamp Antechinus, Grey Goshawk, Forest Raven, Beautiful Firetail, Smooth Frog and Southern Toadlet.

Notable absences of fauna species in the Otways and Shipwreck Coast area is due to the break in habitat by the extensive Victorian Volcanic Plains.

Species include the Common Wombat, Sooty Owl, Southern Pygmy Possum, Greater Glider, Superb Lyrebird, Eastern Whipbird, Red Browed Treecreeper, Pilotbird, and Leewin's Honeyeater.

Grant revealed a rather surprising fact that over ½ Victorian bird species occur regularly in the Otways region with prominent groups being parrots/cockatoos, robins and honeyeaters. The wet forests host a diverse population of birds, some of which are at their western limit (Australian King Parrot, Satin Bowerbird). Otways specialists include Azure Kingfisher, Beautiful Firetail, Olive Whistler and Forest Raven.

Reptiles are limited by cooler temperatures and moist environments, but several skinks are present. The coastal dune scrub habitat is favoured by the vulnerable Eastern Mourning Skink (*Lissolepis coventryi*) Only three snakes are found in the region – Eastern Tiger, Copperhead and the White-lipped. There are 11 species of frog, about one third of Victorian species.

Koalas (*Phascolarctus cinereus*) were reintroduced in mid-1980s and the population grew rapidly, eventually over-browsing their favoured woodland habitat. Lack of predators contributed to the decline in numbers from over-browsing.

They are still common residents.

Eastern Ground Parrot was recorded historically in the Carlisle Heath area. There were breeding populations up to the 1990s, but Grant is yet to find any of this species which is considered endangered. Prescribed burning is said to be a major cause of decline due to habitat loss.
Grant’s book was available for sale at the meeting and can also be obtained online from reputable book stores. It is a comprehensive guide to the wildlife of the Otways region and includes photographs and descriptions of 288 species, information about the habitat types and a guide to key places for viewing wildlife. It could well be that another trip to the Otways will be high on the committee’s 2020 calendar of activities!

A little more Fungus

Photo below is from the excursion to Hillcrest Water Reserve and shows the various stages of the opening of the Bird's-nest fungi *Nidula emodensis.* Once we discovered their identity, we saw numerous examples on logs and bark.
These small hairy cups, up to 1 cm across, are covered by a cap, which falls away at maturity exposing the "eggs" (spore-bearing peridioles) These are then distributed by water drops which fall into the cups, splashing out the contents.

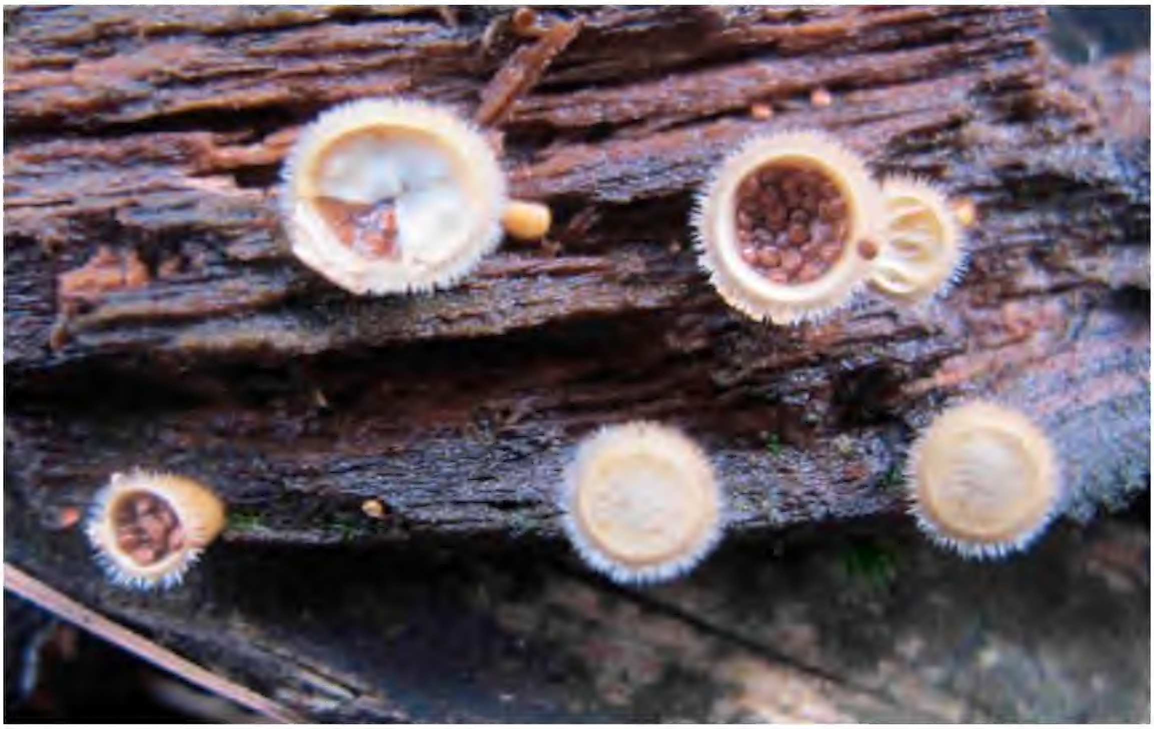


Photo: Val Hocking

Some of the 70 people who attended the fungi foray.

Photo:
Andy Arnold

Mushrooms and Toadstools... should we still use these terms?

At our *fungi*map workshop at Smythesdale in early June, Sapphire McMullan-Fisher warned us not to use the terms "Mushrooms and Toadstools" as they conveyed confusing and imprecise meanings and that they are now considered scientifically outdated.
I recently came across an article written 70 years ago with the same message and with what seemed to me to be some well described features of one of the groups of macrofungi in the basidiomycetes (Phylum Basidiomycota).
Here is an edited version of the April 1949 article by R D Lee on Mushrooms and Toadstools published in "Wild Life" , the then popular Australian Nature Magazine edited by Philip Crosbie Morrison.

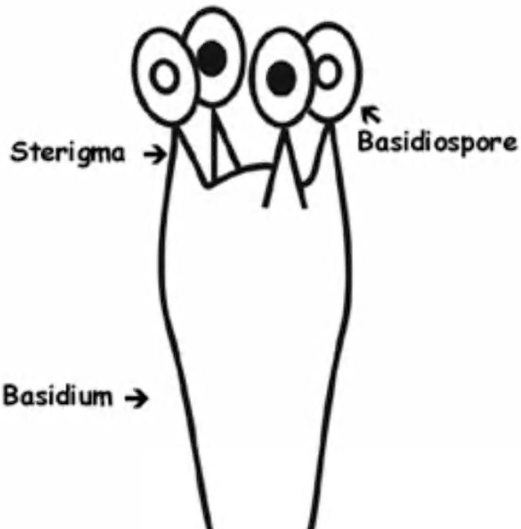
When is a mushroom not a toadstool? The answer is "Not when it's an agaric", and if that doesn't make sense, don't blame the botanists. Rather, blame the people who try to invest inexact, popular names with a precise botanical meaning. Toadstools is almost a folklore name for those fungi of a shape that makes them apt (one might imagine) for a toad to sit upon at a fairy gathering of the 'little folk' in the forest. Mushrooms is the name given to some of the toadstools that are good to eat but you can't apply the name to any distinct section of fungi. Most of the things we regard as mushrooms are closely related - the field mushroom and the rather coarser horse mushroom, but a third member of the same genus, the yellow staining mushroom is classed as a poisonous. Of course, some of the toadstools of the genera Coprinus and Lactarius are undoubtably harmful to eat yet the toadstools known as shaggy caps (*Coprinus atramentarius*) and the saffron milk caps (*Lactarius deliciosus*) (see photo) are regarded by epicures as rare delicacies.

So in the names mushroom and toadstool there appears to be no rhyme or reason but as soon as you call them agarics you know where you are. As soon as you know that your fungus has gills underneath instead of a mesh or net or a series of tiny pores, you can call it an **agaric** (with the accent on the first or second syllable, whichever you prefer according to the Oxford dictionary) and be sure that you will not be misunderstood.

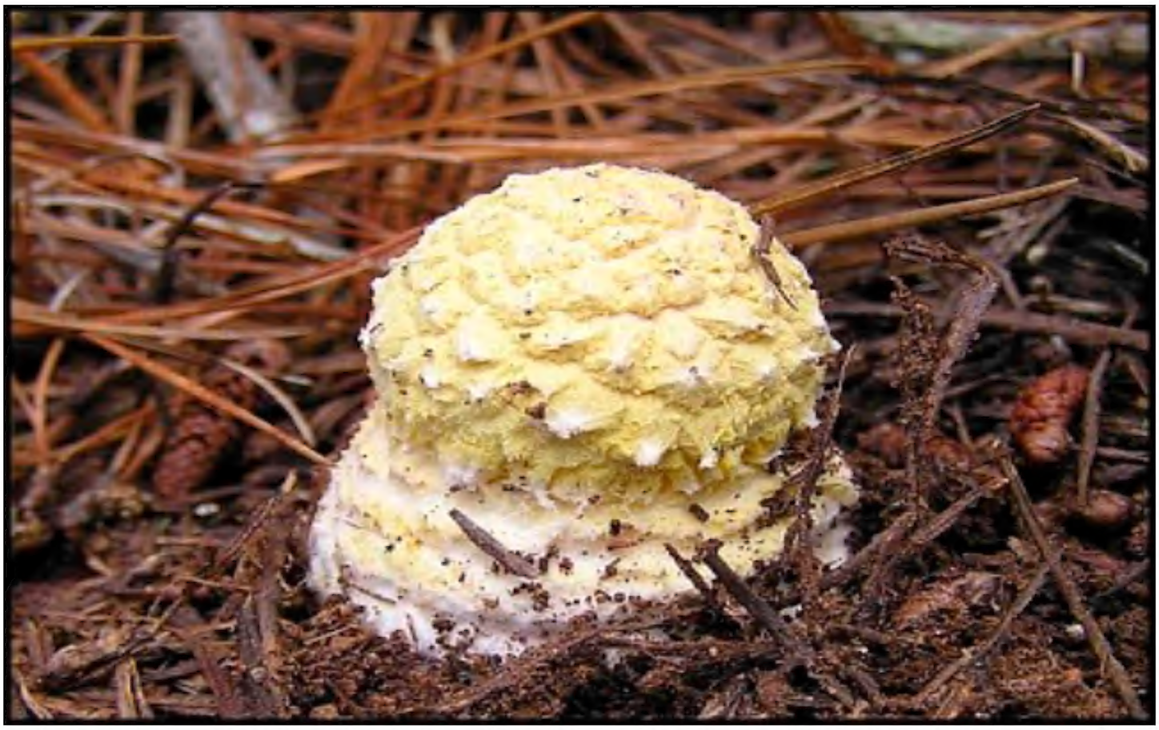
The objects we know as mushrooms or toadstools are merely the fruiting bodies of the organism. The body of the organism itself consists of a myriad threads in masses which permeate decaying vegetation matter beneath the soil or the substance of trees living or dead in which they have obtained a footing. It is remarkable that for all the different shapes, sizes and colours that there are among the fruiting bodies of the many species and families of fungi, the mycelial threads are so alike that they cannot be distinguished - only by the fruiting bodies may they be identified.

Any fungus may be divided into two parts: the first being the **mycelium** which, having no chlorophyll or green colouring matter with which to manufacture food from its elements, extracts food material from its living or dead host until it has made sufficient growth to produce its second part - the fruiting body or **sporophore** which under warm, moist conditions, arises in all its distinction of colour and pattern to spread the spores and so ensure the continuance of its kind.

The agaric fruiting body consists of a stalk, often mounted by a cap or pileus, on the underside of which it bears numerous gills radiating from the stalk. The gills are the important feature since it is from the surface layer or **hymenium** that the spores are produced. Examined with a lens the surface of the gill is seen to be covered with tiny projections (**basidia**) each bearing four tiny stalks (**sterigmata**) and at the tip of each stalk grows a single spore.



Nature has produced some very elaborate precautions for the protection of the maturing gills with their precious spores. The fly agaric (*Amanita muscaria*) for example, breaks through the ground as a small button covered by a complete wrapping membrane, the **volva** which is ruptured as the stalk lengthens.



The remains of the volva persist as a ragged cap surrounding the base of the fast lengthening stalk. The cap is still connected to the stalk by its unexpanded edges as well as by its middle. As it approaches maturity the edges spread out leaving the broken ring or annulus attached to the stalk like a little kilt. Not until this has happened are the gills exposed and the spores ready to fall away and be blown hither and thither by the wind.

Not all kinds of agaric have volva; some have the second protection alone - the ring which joins the edges of the immature cap to the stalk. In some cases a thin cobwebby membrane called a **veil** takes the place of the ring and it may or may not persist in on the stem after the cap has matured. *Cortinarius archeri* is one such species. The name *Cortinarius* being derived from the Latin **cortina** which means “a veil” Others again have neither a volva nor a ring but before maturity the cap is pressed tightly against the stem like a folded umbrella as a protection for the gills. The genus Mycena has this characteristic; so has *Coprinus atramentarius*.

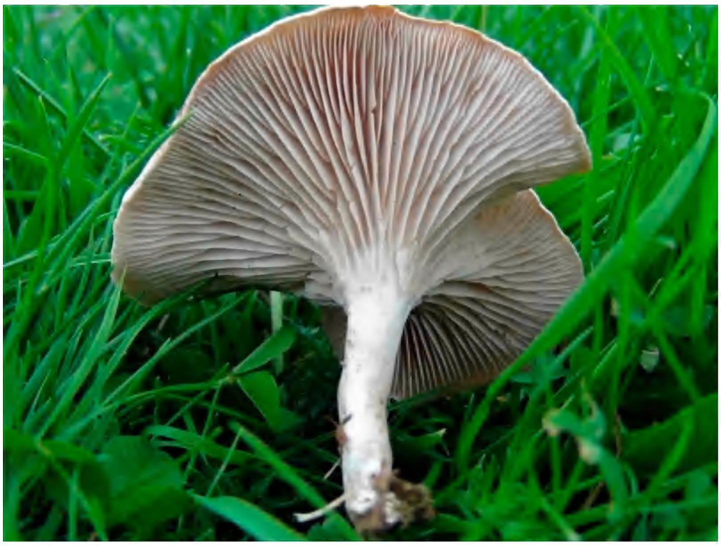
The various species of *Coprinus* have a peculiarity of their own. Starting from the lower edges the gills turn black and then liquefy until the whole body is a black nauseating mess which oozes away in a couple of days leaving no trace. The common name for *Coprinus atramentarius*, Inky caps is very apt. [This last referred to example was well illustrated by John Mildren's series of successive photos of a *Coprinus* going through this cycle in his garden in Field Reports at our June meeting]

The gills of various agarics take different forms by which some genera maybe distinguished. The inner ends in some species curve up and join under the cap, just clear of the stalk as they do in the common field mushroom, such gills described as "**free**". Others curve upwards but join the stalk - these are "**sinuate**", while those which join directly to the stalk without any upward curve are "**adnate**". The most striking are the "**decurrent**" gills as seen in *Clitocybe clitocyboides* which curve downwards and gradually merge into the stem (see below).

For useful illustrations of these terms refer to **Fungi Down Under – the *fungi*map guide to Australian Fungi** page 8 and page 12.

"Wild Life" although written 70 or 80 years ago is still a good source of inspiration and knowledge for the field naturalist if you can manage to find them in a library or second hand bookshop.

Andy Arnold



CALENDAR 2019

July

Fri 5 Basic Insect Identification, Bill Elder FNCB

Sun 7 Excursion - Waterfalls of Hepburn Shire,
John Gregurke FNCB

Tues 23 Committee meeting at Fran Hanrahan's, 7.30 pm

August

Fri 2 Northern Plains Grasslands, Elspeth Swan FNCB

Sun 4 Excursion - Linton Block & Clarkesdale Bird Sanctuary,
Emily Noble, Elspeth Swan, & Paul Norquay FNCB

Committee

President	John Gregurke
Vice Pres	Fran Hanrahan
Secretary	Emily Noble
Treasurer	Kathy Elder
	Andy Arnold
	Bill Elder
	Les Hanrahan
	Val Hocking
	John Petheram
	Margaret Rich
	Elspeth Swan

Correspondence: PO Box 328W, Ballarat West, 3350

Email: Secretary:- Emily Noble
Editor: Bill Elder

Website: http://fieldnatballarat.wordpress.com

Club email: ballaratfnc@gmail.com

Meetings are held at Federation University Gillies St Campus on the first Friday of the month at 7.30pm.
Excursions: Leave from the carpark of Federation University Gillies St Campus at 9.30 am, unless otherwise advised.

A monthly publication of the Field Naturalists' Club of Ballarat Inc.
Incorporation # A0014919P ABN 13 150 403 135